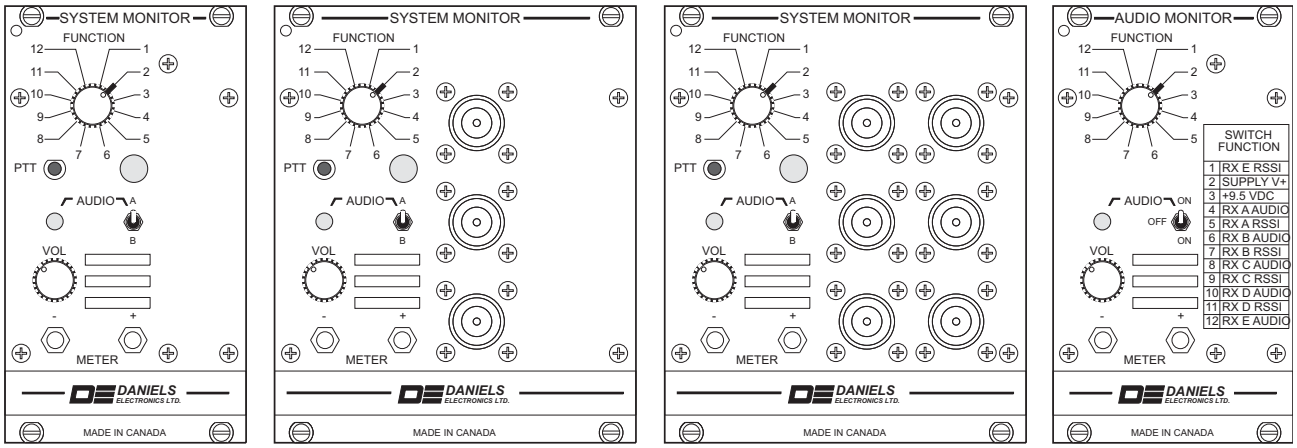
TN810 SM-3 System Monitor

The SM-3 system monitor is a plug-in module which provides voltage regulation, system metering and audio monitoring for an MT-3 or MT-4 radio system. The SM-3 includes the following features:

* High current +9.5 Vdc voltage regulator with an anti-latchup hysteresis circuit.
* Front panel switch selectable meter outputs to check supply voltages, carrier strengths, etc.
* Audio amplifier and loudspeaker.
* Relay drivers.



SM-3-H0-014-00 SM-3-H0-R1N-00 SM-3-H0-R2N-00 SM-3-H0-014-05

There are four different versions of the system monitor.

SM-3-H0-014-00	Standard SM-3 with no relays or meters (14 HP width)
SM-3-H0-R1N-00	SM-3 with single antenna relay on the front panel (21 HP width)
SM-3-H0-R2N-00	SM-3 with dual antenna relays on the front panel (21 HP width)
SM-3-H0-014-05	Audio Monitor for use with the Multiple Receiver Subrack (14 HP width)

Older versions of the system monitor were available with a main power switch or an analog meter on the front panel.

The System Monitors have a rotary switch on the front panel allows the various functions to be selected for monitoring. Two front panel jacks, or the optional analog DC voltmeter, are provided for monitoring of selected functions. An audio amplifier and loudspeaker allow for audio monitoring. Front panel controls allow for audio volume adjustment and for selecting audio from receivers A or B, or turning the audio circuits off to reduce power consumption. An LED indicator illuminates when the audio circuits are on. A front panel switch enables PTT on both transmitters for testing.

The Audio Monitor operates similar to the System Monitor, but with slightly different switch controls.

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SM-3 System Monitor Switch Functions:

Position	Function	Parameters
1	No Connection	Not Used
2	Supply Voltage	+10 Vdc to +17 Vdc (+13.8 Vdc nominal)
3	+9.5 Volts Regulated	+9.5 Vdc (± 0.1 Vdc)
4	Rx A Carrier Strength	+1 Vdc to +5 Vdc (MT-3) 0 Vdc to +3.3 Vdc (MT-4E) based on received signal strength **MT-3; MT-4E Systems only.**
5	Rx B Carrier Strength	+1 Vdc to +5 Vdc (MT-3) 0 Vdc to +3.3 Vdc (MT-4E) based on received signal strength **MT-3; MT-4E Systems only.**
6	Rx A +6.0 Volts	+6.0 Vdc (± 0.1 Vdc) **MT-3 Systems only.**
7	Rx B +6.0 Volts	+6.0 Vdc (± 0.1 Vdc) **MT-3 Systems only.**
8	*Rx A / B Audio	1.0 KHz tone at approximately 308 mVac (-8 dBm) when applying a 1.0 KHz tone at 60% max. dev. into the Rx.
9	Spare	Not Used (Possible future use for VSWR A)
10	Spare	Not Used (Possible future use for VSWR B)
11	Rx A Priority COR	Open Collector Output; Measure with an Ohm meter. Ground for Active; Open for Inactive **MT-3 Systems only.**
11	Rx A A/D Receive Mode	Ground for Analog Rx or No Rx; High for Digital Rx **MT-4E Systems Only.**
12	Rx B Priority COR	Open Collector Output; Measure with an Ohm meter. Ground for Active; Open for Inactive **MT-3 Systems only.**
12	Rx B A/D Receive Mode	Ground for Analog Rx or No Rx; High for Digital Rx **MT-4E Systems Only.**

* Note: Select Rx A or Rx B audio using the front panel audio switch (the middle position is OFF). The received signal will also be audible on the speaker in the system monitor. Remember to turn the switch OFF when leaving a solar powered site (approximately 50 mA current savings). The audio level of 308 mVac is not critical and may vary greatly depending on the setup of the receiver.

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